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INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

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COUNTRY USSR

REPORT

SUBJECT Civil Defense Shelters in Moscow and Tbilisi

DATE DISTR. 7 April 1961

NO. PAGES 1

REFERENCES

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DATE OF INFO.

PLACE & DATE ACQ.

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SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

The following reports on air raid shelters in the USSR

a. Atomic shelters at the Krasnyy Proletariy Machine Plant in Moscow. Description and sketches of two basement shelters.

b. Civil defense construction in Moscow. Description of shelters being constructed under buildings which exceeded six stories. A sketch of a shelter is provided. A few details on the suitability of the Moscow Metro as a shelter. The Metro was not suitable for gas or radiation attacks, since it was not equipped with hermetically sealed doors.

c. A brief description of basement shelters in Tbilisi.

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INFORMATION REPORT

COUNTRY: USSR (Moscow Oblast)

REPORT NO.:

SUBJECT: Civil Defense Construction in Moscow

DATE OF INFO:

50X1-HUM

DATE ACQUIRE

PLACE ACQUIRED

DATE OF REPORT: 29 September 1960

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CIVIL DEFENSE CONSTRUCTION IN MOSCOW

1. There was in existence a governmental decree which required that all buildings which exceeded six stories had to have civil defense shelters. The personnel sections 50X1-HUM of the construction enterprises would receive plans for the shelters from the liaison officer of the MVO (MPVO?), and the engineers responsible for the construction of the shelters could take notes. However, the engineers could never retain the plans.

2. The shelters were constructed on a foundation of prefabricated concrete blocks, and were about 3-5 meters deep. The walls were of brick and varied in thickness from 90 to 100 centimeters. Between the external walls and the walls of the compartments, there was a 120 to 150 centimeter wide passageway which followed the interior perimeter of the basement wall. This passageway was intended to counteract the effects of an explosive blast. Another passageway, an emergency exit, about as long as the building was

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high, led off from this circumferential passage. It was lined with concrete and had an exit either into the central courtyard of the building or at the rear of the building. The exit consisted of a vertical well equipped with a ladder and covered with a metal top similar to those used for manhole covers.

3. The individual compartments of the shelters measured about 6 x 6 meters. The interior walls, which made up the various compartments, were constructed of brick some 50 centimeters thick. Each compartment had an entrance which gave access to the circumferential passage. This entrance had a set of two steel doors which had an intervening 2 x 2-meter air space. These doors, closed hermetically, were composed of one thickness of steel, and had rubber gaskets. They had no windows or peepholes. There was a steel door between the circumferential passageway and the emergency exit which was exactly like the doors of the individual compartments except that it did not close hermetically or have rubber gaskets.

4. The ceilings of the shelters were constructed of octagonal-shaped reinforced concrete slabs. There were several sizes of these roof slabs: PU-1, which was two meters long and .80 meters wide; PU-2, which was 2.20 meters long and .40 meters wide; and PU-3, which was 3.20 meters long and .40 meters wide. Type PU-1 was used for the ceiling of the passageways, while the other two types were used for the ceilings of the individual compartments. The compartment ceilings were supported by double "T" steel beams and were faced with a layer of concrete between the beams. A meshwork of six millimeter steel with squares measuring 10 by 10 centimeters was placed over this layer of concrete and was covered by another layer of concrete, 10 centimeters thick, thus filling in the spaces left by the double "T" beam. This meshwork was anchored to the side walls of the compartments with steel "anchors" having a circumference of twenty millimeters and spaced one meter apart.

5. These shelters were completely isolated and independent of one another with no interconnecting tunnels, and each was intended only for its particular housing unit. There were no interconnecting tunnels except for the emergency exit which led to the outside, and this was to be used only when the basement and shelter stairs were out of commission.

6. During the construction of the shelters there was no way of determing the ultimate use of any of the individual compartments. [redacted] toilet facilities and air conditioning equipment would be installed in each compartment. The air purification equipment was not usually installed until an emergency arose. 50X1-HUM
However there were 20 x 20 centimeter niches in the walls of the individual compartments which [redacted] were for the installation of filter-type air purification equipment. [redacted] 50X1-HUM
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There were no water tanks or food storage facilities in the shelters, but provisions could be made for these in one of the compartments in case of necessity.

7. The metro, which in some stations such as the Dinamo station was 37 meters deep, was suitable as a shelter against air raids, but it was not suitable for gas or radiation attacks. since it was not equipped with hermetically sealed doors. special shelters areas constructed in the metro.

8. See the sketches of the shelter and its components on page 7.

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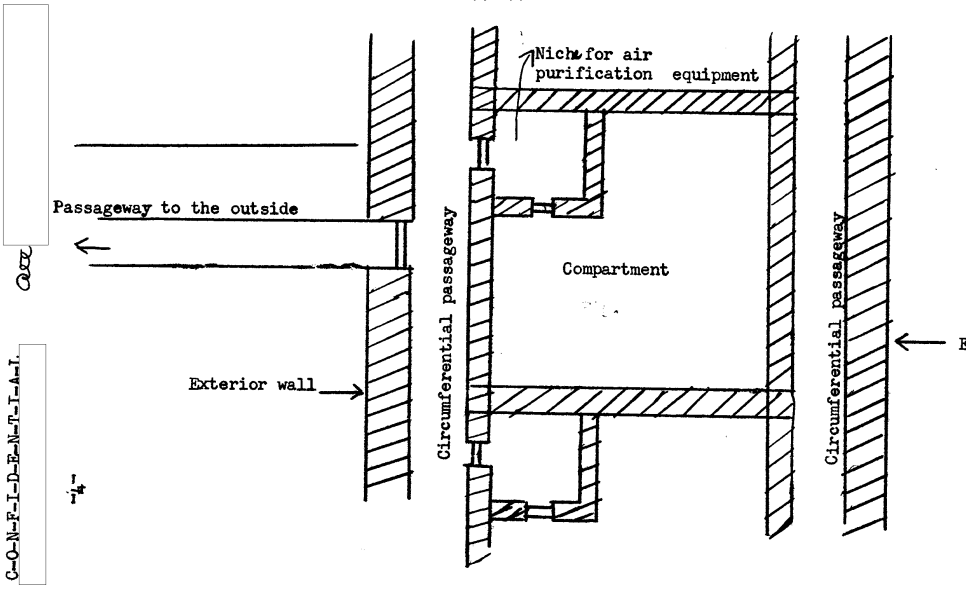
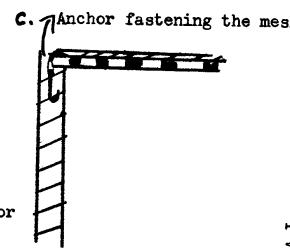
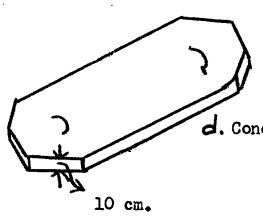


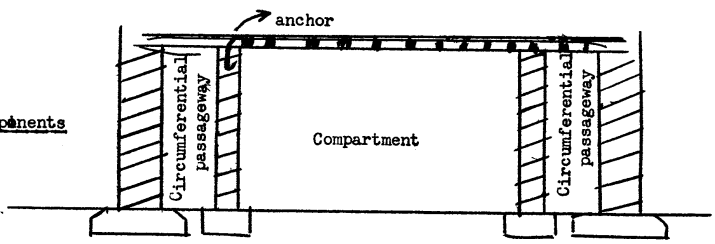
a. Floor Plan of Shelter
Scale 1:100





d. Concrete Slabs used in Ceiling

Shelter and Its Components



b. Cross-sectional View of Shelter

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COUNTRY: **USSR (Georgian SSR)**

REPORT

SUBJECT: **1. General Information on Tbilisi, including Sanitation.**
2. Air Raid Shelters in Tbilisi.

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DATE OF REPORT: **18 August 1960** 50X1-HUM

7. [redacted] basement shelters were constructed in various housing units and a primary school on Sovartalo street; and other housing units, a primary school and an institute on Rustaveli street. The basement walls were of reinforced concrete about 1.20 meters thick. The basements were about four to five meters high and had ceilings of cement and steel beams placed 60 centimeters apart. Each living space [redacted] had three or four reinforced concrete columns and in each corner there was a supporting column, also of reinforced concrete, which measured about 30 to 40 centimeters wide. These basements had several large living spaces whose floors consisted of powdered stone (floating stone; sic: volcanic tuff?) mixed with cement and sand, resulting in good sound dampening properties. The basement ceiling was ground level. Each living space /in the basement/ had double /two sets of?/ steel doors with an air chamber between the doors. Each door was about eight or ten millimeters thick and each door had its own closing system. The main entrance to the

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[redacted]

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ad [redacted]

shelter also consisted of a double steel door. Each living space also had several alcoves measuring 1.50 meters high by 2 meters wide in one of the walls. The alcoves had steel doors and they were for food storage. All living spaces had electrical service, electrical refrigeration and an occulting system Each basement had toilet facilities as well as a reinforced concrete escape tunnel, which lead directly to the street. These tunnels had double steel doors at their exits which could be opened or closed onlyfrom the inside. The tunnels measured about 80 centimeters high and 60 centimeters wide.

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Country: USSR(Moscow oblast)

Subject: The Krasnyy Proletariy Machine Plant, Including Atomic Shelters at the Plant

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Atomic Shelters

1. The Krasnyy Proletariy Machine Plant had no restricted sections and no underground installations. However it did have basements and shelters in almost all of the buildings. [redacted] two of these shelters (See the sketches of the shelters beneath Fitting and Assembly Shop No. 1 and beneath the infirmary and test laboratory on pages and). However others were under construction. The shelter beneath Fitting and Assembly Shop No. 1 was not very deep and was made entirely of concrete poured over steel mesh. [redacted] While the shelter was under construction [redacted] trenches within the shop and in the courtyard in which reinforced steel pipes and very well protected electric cables were being installed. [redacted] the total shelter area was not less than about 60 square meters. Although this shelter was not secret, entrance to it was not permitted in order to facilitate upkeep. No new buildings were being constructed at the plant. Some shops were being reconstructed or remodeled. [redacted]

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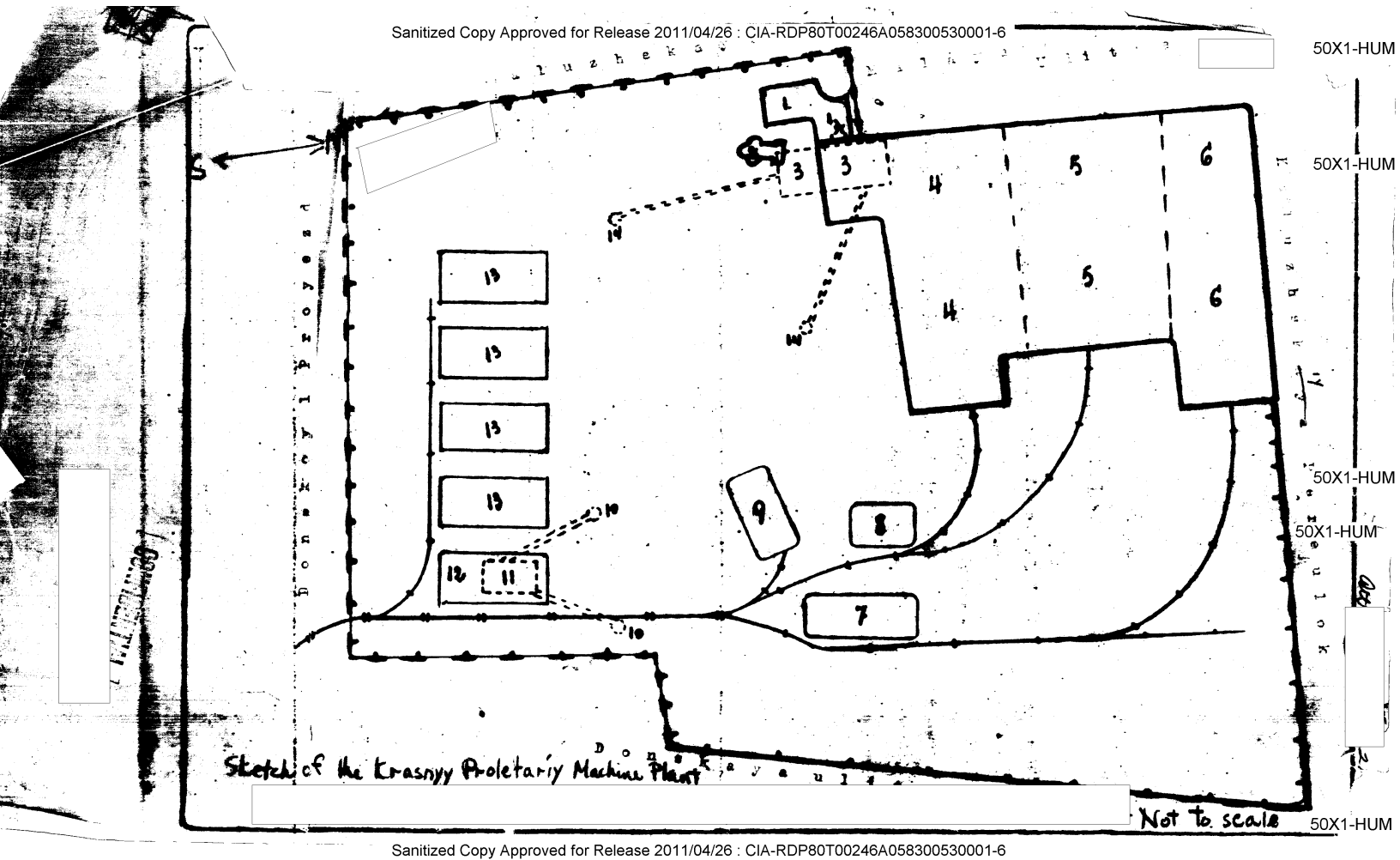
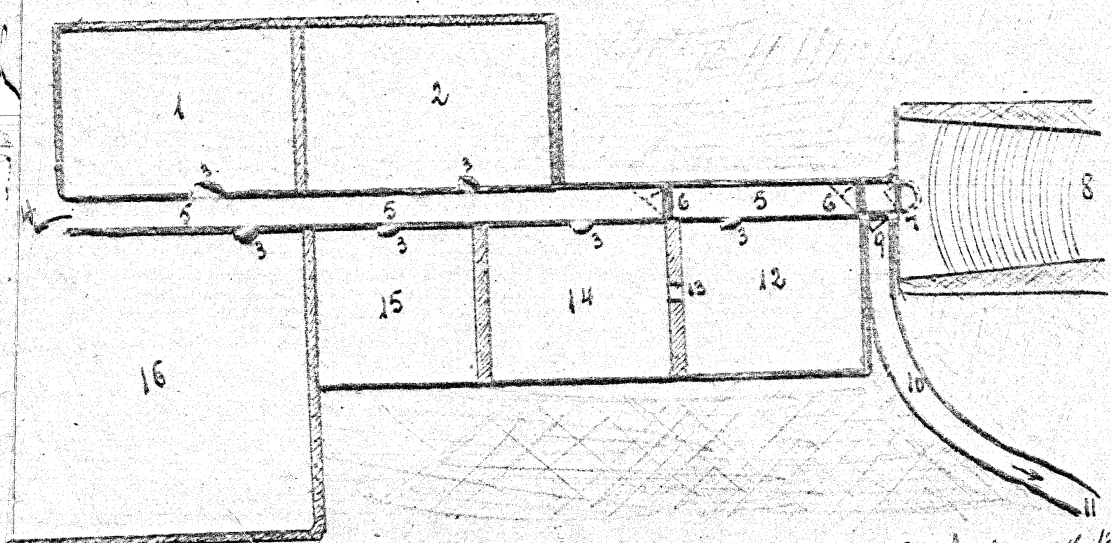


[redacted]

Sketch of Part of an Atomic Shelter Under Fitting and Assembly Shop No. 1.



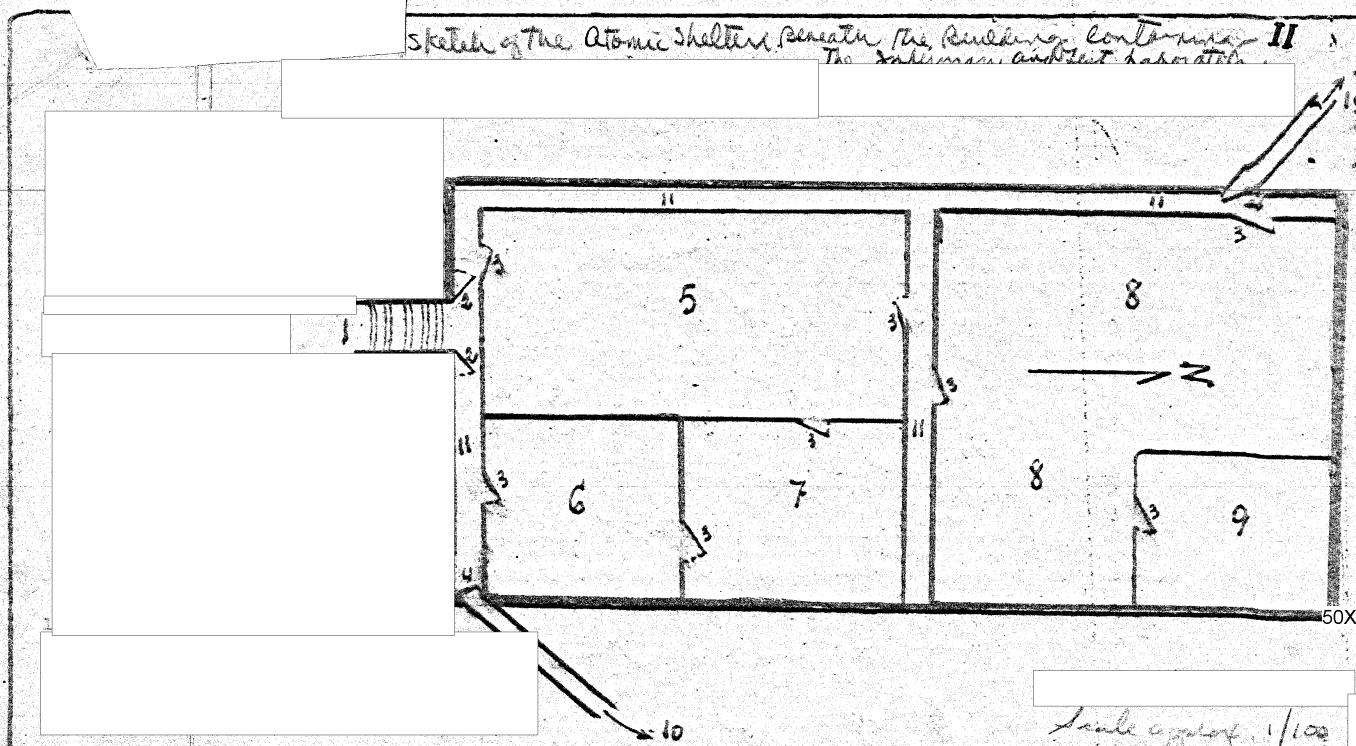
[redacted]

Scale approx 1:100.

[redacted]

Sketch of the Atomic Shelter beneath the Building containing The [illegible] Architect Laboratory

II



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[redacted]

Legend to the ~~Layout~~ Sketch of the Krasnyy Proletarskiy Zavod ~~Machine~~ Plant.

1. Administrative offices of the plant, which had an entrance to the shelter at Point 3.

2. Labor unions and library, which had an entrance to the shelter at Point 3.

3. Approximate location of an atomic shelter under Fitting and Assembly Shop No. 1. This shelter was constructed especially for the [redacted] plant directors and ~~safety~~ rescue brigade directors. (See the sketch of the shelter on page –)

4. Fitting and Assembly Shop No. 1.

5. Fitting and Assembly Shop No. 2.

6. Fitting and Assembly Shop No. 3.

7. Foundry for bronze, aluminium alloys, copper and other soft metals.

8. Plant electricity transformers.

9. [redacted] Storehouse for finished machines. The paint shop was also in this building. The Russian designation for this building was sklad [redacted] gotovykh izdeliy.

10. Emergency exits of the shelter at Point 11.

11. Atomic shelter which was located in the basement of the building ~~which housed~~ the infirmary, a machine test laboratory, and a shop which was no longer in operation but which was equipped for producing light arms. (See the sketch of the shelters on page – at Point 12.)

12. A building which houssd the infirmary, a small machine test laboratory, and a shop equipped to produce light armaments.

[redacted]

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13. Separate buildings housing design, carpenter, casting, hammering, piston, compressor and other shops.

14. Emergency exists to the shelter at Point 3.

[redacted]

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Regard to the Fitting and Assembly Shop Under the

SKETCH OF ATOMIC SHELTER LOCATED ~~BENEATH~~ SHOP Nº. 1, ~~PLANT 456, KHIMKI~~

--LEGEND--

1. Infirmary, clinic, operating room, pharmacy, with an approximate area of 5 x 3.5 x 2.20 meters. [redacted] this ~~department~~ compartment had an additional room containing beds. 50X1-HUM

2. Fil ter ~~department~~ compartment containing the ventilation and heating systems, water purifiers, and safety controls. It measured about 1x 3.5 x 2.20 meters. A supply of special suits and masks was stored there. 50X1-HUM

3. Automatic metal doors made of two plates with [redacted] or some other material was cement between them that made them very heavy. The doors had rubber gaskets and ~~X~~ peepholes. They measured 1 x 2 x 0.20 meters. 50X1-HUM

4. End of hallway that gave access to the different ~~departments~~ compartments . [redacted] it continued to an emergency exit and entrance to the ~~Labor~~ Unions. The part of the hallway [redacted] measured about 20 meters long by about 2.5 meters high and 1 meter wide. Electric cables, piping, lights, and other installations [redacted] were for ventilation, fire fighting, etc., ran along the ceiling. 50X1-HUM 50X1-HUM

5.Hallway with three automatic doors.

6. Two automatic, metal safety doors with rubber (gaskets). These doors also had peepholes.

7. Shelter entrance door opposite (at the foot of) the cement stairway that led from Fitting and Assembly Shop Nº. 1. The entrance door had one metal plate reinforced with angle irons and shut tight under pressure (?). It was somewhat wider and higher than the others.

8.Conical stairwell with cement walls and stairway; the base of the cone was located at the entrance to the shelter, and the narrow part of the cone at the shop entrance. [redacted] the stairwell was conical so that, pressure on the shelter would be much lighter. 50X1-HUM

9. Automatic, metal, double door shutting tight under pressure; it gave access to theemergency exit passageway which ran to the eastern side of the plant courtyard. This passageway had about the same height and width as the other hallways. 50X1-HUM

[redacted]

10. Approximate direction of the passageway.

11. Part that had other safety doors.

12. Telephone command post for plant rescue brigades in case of air or gas attack. It contained a switchboard and at least five telephones, two of which must have been direct outside lines;

13. Window for observing and passing orders to the telephone command post from the administrative department, point №. 14.

14. Administrative department, containing the plant director, chief engineers, and administrative personnel.

15. Storage of food, masks, tools, and an electric stove. Other items were stored in the shelter, because a supply of special suits (clothing) and masks was stored in the filter department.

16. Room for use by persons not assigned specific defense or work duties. these persons were the bureaucratic and auxiliary personnel of the plant.

Legend to the Sketch of the ~~Shelter of~~ at

ATOMIC SHELTER LOCATED BENEATH THE BUILDING CONTAINING THE INFIRMARY AND MACHINERY TEST LABORATORY OF ~~THE KRASNYY PROLETARSKIY ZAVOD~~

--LEGEND--

1. Stairway to shelter.
2. Metal doors with rubber gaskets.
3. Metal doors with rubber gaskets, giving access to the different shelter ~~departments~~ compartments.
4. Metal exit doors to emergency passageways.
5. Room for rescue workers.
6. ~~Filter department~~ Compartment containing filters, ventilating equipment, electrical controls, masks, and clothing.
7. ~~Management department and telephone service (installations).~~ compartment for the director (plant) and telephones.
8. Room for personnel not assigned specific duties. Selected plant personnel received civil defense instruction here.
9. ~~Infirmary~~ First aid room, kitchen, washrooms, ~~etc.~~ shop
10. Emergency exits to patio.
11. Safety corridors providing communication between the various rooms.

NOTE: Selected plant personnel received civil defense instruction at point in department No. 8.